

Please add the abstract to the specification as page 66.

ABSTRACT

This invention related generally to methods of detecting and quantifying biomarkers of oxidative stress in proteins. The biomarker may be any amino acid that has undergone oxidation (or other modification, e.g. chloro-tyrosine, dityrosine). Emphasis is given herein on oxidized sulfur- or selenium-containing amino acids (SSAA). The biomarker of oxidative stress in proteins may be detected with an antibody that binds to oxidized amino acids, specifically oxidized sulfur- or selenium-containing amino acids. The antibody may be monoclonal or polyclonal. The presence of biomarker or amount of biomarker present in a sample may be used to aid in assessing the efficacy of environmental, nutritional and therapeutic interventions, among other uses.